## **DAZITOL** – The Silver Bullet Replacement for Methyl Bromide Pre-plant Usage

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#### Introduction

One year ago in San Diego, at the 1997 Annual International Research Conference on Methyl Bromide Alternatives, we heard a presentation from a scientist from the Agriculture Research Service (ARS) of the United States Department of Agriculture (USDA) about promising results on soil populations of fusarium and other soilborne pathogens derived from a patented formulation of Champon 100% Natural Products, Inc. ARS subsequently committed to a program of concerted nationwide testing of plant extracts for soil treatment. Although to our knowledge such a government-funded testing program has yet to be launched, last November we at Champon embarked on a self-funded, intensive regime of laboratory and in-field testing, by engaging the services of the well-respected scientists at the University of Florida Tropical Research and Education Center and at Glades Crop Control, Jupiter, Florida. Other observations and studies were conducted independently by Florida growers and also by established methyl bromide and insecticide manufacturers and distributors who wished to verify and replicate the research data we provided them.

In every instance, DAZITOL has performed to expectations. As president of Champon 100% Natural Products, Inc., and formulator of DAZITOL, I am now pleased to announce what only a year ago was considered unimaginable by government regulators and methyl bromide alternative researchers. The silver bullet replacement for methyl bromide pre-plant usage has been formulated, patented, tested, approved by the EPA, and is commercially available through an international network of distributors.

#### Evidence

DAZITOL sterilizes the soil before planting and attracts beneficial nematodes from the breakdown of the organic matter from the essential oils in the soil. Planting is done only 3 days after application at a rate of 200 - 300 pounds per acre. DAZITOL has been effectively applied by tractor, dripping system, and backpack. In all cases, plastic tarping is used. Some of the studies and testing that confirm the effectiveness of DAZITOL are as follows:

1. Manley Farms, Naples, Florida – Documented test results from the University of Florida and Glades Crop Care on six acres of a Florida tomato farm from January - May, 1998 proved DAZITOL to be as effective as methyl bromide against insects and fungus. Six acres of the tomato farm were set aside for testing of DAZITOL. Of these, 3 acres received DAZITOL soil treatment and an adjacent 3 acres were fumigated with methyl bromide.

The 3 Champon acres also were treated with Champon's all natural BUGITOL insecticide whereas the 3 methyl bromide acres were treated with an assortment of synthetic chemical insecticides normally commercially used. The result, as studied and reported by the University of Florida Tropical Research and Education Center: "Champ all natural product (DAZITOL) was found more effective than methyl bromide."

- 2. Golf course/nematode study Studies conducted by the University of Florida and A& L Labs (Pompano Beach, Florida) on several golf courses in Florida during the spring/summer of 1998 found DAZITOL to be as effective or better than Nemacure for control of nematodes in the soil.
- 3. ARS/USDA Study Plant pathologists Dr. James Locke and Dr. John Bowers of the Agriculture Research Service of the USDA reported at last year's conference on DAZITOL's effectiveness in laboratory tests of soil populations of fusarium and other soilborne pathogens.
- 4. Gonzales Farms, South Florida Testing of DAZITOL by Glades Crop Control found it effective against nematodes.
- 5. Studies conducted by a team of entomologists and plant pathologists from the University of Florida found DAZITOL effective against many different fungi.

## What is DAZITOL?

Many volatile compounds (known as essential oils) from aromatic plants, spices, and herbs possess pesticidal properties for a wide variety of insects, pests, and pathogens. DAZITOL is a simple, safe, and effective liquid spray product whose active ingredients are essential oil of mustard and oleoresin of capsicum from chili peppers. DAZITOL is non toxic, biodegradable, made of natural chemicals, and meets the requirements of the EPA, Food Quality Protection Act, Clean Air Act, and the EPA Office of Children Safety Protection.

## **Natural Chemicals**

All plants and animals are made up of chemicals and are provided by nature with a defense system. The natural defenses of plants against outside predators such as insects and fungus vary by plant and predator. Natural predators know which plants lack specific defenses against them so that they can eat them without harm. Champon 100% Natural Products, Inc. studies the defenses of different plants, extracts from those plants that natural chemical that makes up the defenses, and combines these natural chemicals to create a pesticide that can kill a broad spectrum of insects and fungus. Champon pesticides are harmless to humans, safe for fruits and vegetables, and without negative effects on children or the environment, because they are created with natural chemicals used in foods.

The ecology of rain forests that for billions of years have survived without the use of toxic, artificial chemicals from petroleum provide an obvious example of the science behind the Champon natural chemical approach. Champon 100% Natural Products, Inc. believes it is time to learn from nature rather than allow our land and food supply to be destroyed by chemical companies producing artificial pesticides. Champon has begun to unlock the secrets of nature to understand how to protect our land and crops with natural means such as those found in the rain forests.

## **Application**

DAZITOL sterilizes the soil before planting and also attracts beneficial nematodes from the breakdown of essential oils in the soil. Planting is done only 3 days after application at a rate of 200 - 300 pounds per acre. DAZITOL has been effectively applied in South Florida by chisel (current method used for methyl bromide) and spray system. DAZITOL is proven effective when applied by dripping system in tests conducted in Central and South America, and also when applied by backpack in Central and South America. In all cases, plastic tarping is used.

#### Cost

DAZITOL is price competitive to methyl bromide. Application methods make the overall cost of DAZITOL less expensive per acre than methyl bromide.

## **Sales and Marketing**

We first met with Florida Agriculture Commissioner Bob Crawford early last summer. At that time my partner Ralph Devine said, "This is such a good product. I've been surprised at how difficult it is to bring it to market." Although a seasoned businessman and anything but naive, Ralph was not well-exposed to the sometimes treacherous interplay that can occur between politics and business. After an unsatisfactory trip to Washington, D.C. to tell a House Agriculture subcommittee hearing about our product, Ralph decided that if Members of Congress want to ignore or even outright deny that we have the replacement to methyl bromide preplant, spend another \$100 million on methyl bromide alternative research, and fight to amend the Clean Air Act to delay the phase out, then let them slug it out. We decided to leave the politics to the politicians and the big corporations, and concentrate on marketing and sales in Florida, Central and South America. I wish Ralph Devine were here today to witness that in just 6 months since his decision, DAZITOL is being sold and used in 9 countries of the world.

## **Policy Implications**

On June 29, the EPA approved DAZITOL as the first and only alternative to methyl bromide for pre-plant soil treatment use. Explosive growth in market use and acceptance is occurring. The United States can therefore proceed with confidence to phase out methyl bromide in accordance with the Montreal Protocol and provisions

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#### **Direction for Research**

The U.S. Congress does not need to continue funding methyl bromide alternative research at the rate of \$14 - \$17 million a year. However, a member of Congressman Vic Fazio's staff told us last spring, "It doesn't matter how many growers are using DAZITOL. People around here listen to the ARS. It is the ARS that must approve your product." For this reason, there is need for government research that is redirected at understanding the properties and efficacy of plant extracts for agricultural uses. Congressman Fazio's office is mistaken. Neither our products nor those of any other company require USDA and ARS approval. But it is nevertheless best that those influential policymakers who are distant from marketplace realities receive information of a changing world in the manner in which they are accustomed – through government-sponsored research.

#### Conclusion

The silver bullet replacement for methyl bromide pre-plant usage has been formulated, patented, tested, approved by the EPA, and is commercially available in quantities sufficient to satisfy 100% of U.S. market needs. DAZITOL is a non-toxic soil treatment derived from essential oils formulated at dosage levels that can be metabolized by the human body. Such a technological breakthrough will result in a profound industry re-orientation away from toxic and ozone-depleting synthetic chemicals and in the direction of essential oils.